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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,745	10/30/2001	Gustavo R. Paz-Pujalt	83599RLO	9684

7590 10/19/2004  
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EXAMINER

CHAWAN, SHEELA C

ART UNIT	PAPER NUMBER
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2625

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/020,745

Applicant(s)

GUSTAVO,R. PAZ

Examiner

Sheela C Chawan

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Drawings***

1. The Examiner has approved drawings filed on 2/12/02.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-10 are rejected under 35 U.S.C. 102 (e) as being anticipated by Petrou et al. (US 6,243,483 B1).

For claim 1, Petrou discloses a method for superimposing graphic representation of ground locations (fig 1, element 10 pipeline images are used for providing ground location, superimposing of pipeline data and satellite imagery in graphical representation as shown in fig 3) onto images of ground locations after detecting the presence of material failures (note, detecting defect or change in pipeline corresponds to material failure or failures in man – made structures, see column 1 lines 23-67 which explains the causes or reasons for failures in a underground man-made pipeline structure ) or failures in man-made structures ( fig 1, element 10 reads on mad-made structure) in such ground locations comprising the steps of:

- a) providing an image sensor spaced remotely (fig 1, GPS 20, VHRSI 50 are used as sensors, GPS 20 is used to obtain pipeline data and VHR satellite 50 is

Art Unit: 2625

used for remote or satellite imagery) from the ground and which sequentially captures a number of images of various ground locations (fig 1, element 10 the location of pipeline is used for capturing sequential images of various ground locations) to provide digital images (figure 2, graphic card 112 is used for getting digital images) of such ground locations (figure 1);

b) processing captured digital images to determine the presence of a potential material failure in a man –made structure in accordance with predetermined coordinate positions which locate the man-made structures (pipeline 10) in one or more of the captured digital images (column 3, lines 18-29, also step 316 in figure 3 displays the results of the comparison if there is a change as a defect in the graphical form);

c) identifying reference points in the ground locations (column 8 line 61 to column 9 line 18, mapping the pipeline system by tracking and locating points which are used as reference points for mapping, fig 3, step 310) corresponding to the same reference points in the graphic representations (fig 3, elements 316, 318 provides graphic representation) of the ground locations (figure 3, element 312); and

d) superimposing the graphic representation with the reference points onto at least one of the captured digital images (fig 3, steps 310, 314, 316, 318).

For claim 2, Petrou discloses a method further including scaling (column 7 line 63 to column 8 line 8) the digital images to match or register (column 9, lines 13-18) with the graphic representation of ground location.

For claim 3, Petrou discloses a method further including encoding with color (column 4 line 65 to column 5 line 10, three color bands provide encoding with compared to four band products) or other symbol predetermined areas of interest.

For claim 4, Petrou discloses a method further including displaying the layered information as a whole or in superimposable layers in either soft display (figure 2, video display 126 and in figure 3, steps 316 and 318 provide merged pipeline data map and satellite imagery in layered form) or printed hardcopy.

For claim 5, Petrou discloses a method further including supplying to a customer combined sets of graphic representations including that indication that there is potential material failure detected in a predetermined coordinate position (column 5, lines 11-21, third party reads on customer).

For claim 6, Petrou discloses a method further including:

e) sending captured processed digital images with detected potential material failures to a customer (column 5, lines 11-21, third party corresponds to a customer).

For claim 7, Petrou discloses a method wherein the digital image processing includes comparing previously captured digital images with newly captured digital images to determine variations in the captured digital images at the predetermined coordinates which indicate a potential material failure in a man-made structure (fig 3, column 7 line 48 to column 8 line 8).

For claim 8, Petrou discloses a method further including providing an image capture device which is located in a fixed structure position above the ground location or in a moving structure such as an aircraft or satellite (fig 1, GPS 20, VHR 50).

For claim 9, Petrou discloses a method further including storing in memory a representation of different material failures to be detected and comparing the captured digital image with the material failures to determine the presence of a material failure, type of material failures and location of the material failures (figure 3, column 7 line 48 to column 8 line 8).

For claim 10, Petrou discloses a method of identifying material failures (column 3, lines 18-35) in man-made structures (fig 1, pipeline 10 is a man-made structure) comprising the steps of:

a) providing an image of a ground location (fig 1, GPS 20, VHRSI 50 are used for providing an image of pipeline data and satellite imagery) and identifying material failures (column 3, lines 18-35, step 318 in figure 3 identifies the changes or defects in the pipeline structure in graphical form) or potential material failures in a man-made structure (fig 1, pipeline 10 corresponds to a man-made structure) at such ground location; and

b) superimposing a graphic representation over such ground location image to aid in the identification of the position of the material failure in the man-made structure (as shown in figure 3, steps 310, 314, 316, 318 are used for integration of pipeline data and satellite imagery in graphical representation on display).

***Other prior art cited***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hsu (US 5,341,439) discloses a system for texture-based automatic detection of man-made objects in representations of sensed natural environmental scenes.

Stolarczyk et al. (US 6,522,285 B2) disclose a ground-penetrating imaging and detecting radar.

Khanna et al. (US 6,343,534 B1) disclose a landmine detector with a high-power microwave illuminator and an infrared detector.

Wettersvik et al. (US 4,913,558) disclose a method and apparatus for detecting leaks and other defects on sewers and the like channels.

***Contact Information***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheela C Chawan whose telephone number is 703-305-4876. The examiner can normally be reached on Monday - Thursday 8 - 6.30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on 703-308-5246. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sheela Chawan  
Patent Examiner  
Group Art Unit 2625  
October 18, 2004